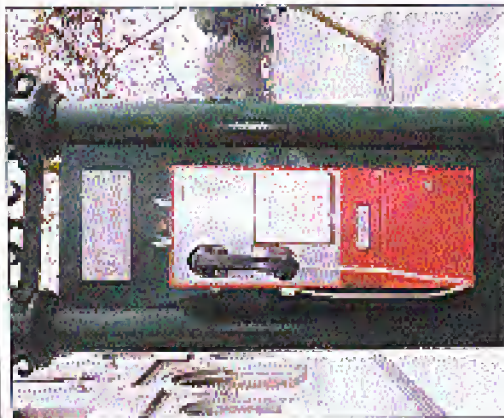
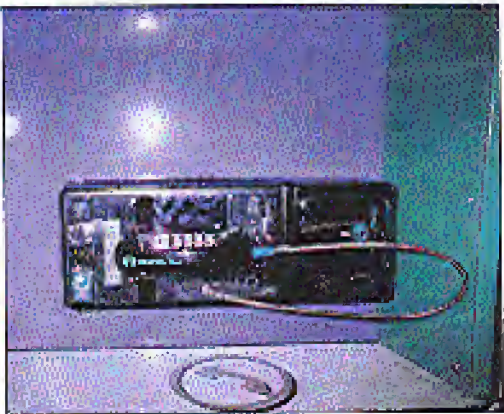


Foreign Payphones



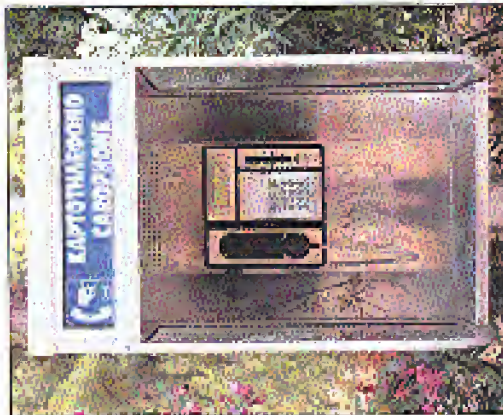
Santiago, Chile. Living proof that a bright red phone always brightens up a street.

Photo by Sol Perez



Santiago, Chile. This is what that ugly message phone will get you - glass and lots of it.

Photo by Sol Perez



Athens, Greece. Found at the base of the Parthenon.

Photo by Peter Photopoulos



Kyoto, Japan. An LCDM phone that looks too much like it's for its own good. We wouldn't be surprised if it speaks.

Photo by eclipse

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The Hacker Quarterly



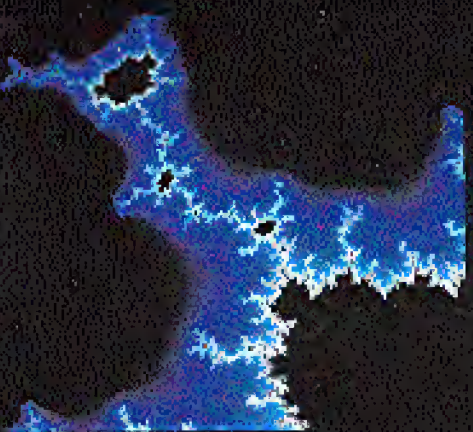
Come and visit our website and see our vast array of payphone photos that we've compiled! <http://www.2600.com>

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New York City

July 14th to July 16th, 2000



H2K

Full details on page 56.

Updates on www.h2k.net.

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Hacking can get you in a whole lot more trouble than you think and is a completely creepy thing to do." - DAS web page aimed at kids to discourage hacking

(www.usdoj.gov/kidspage/do-dont/reckless.htm)

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Violence, Vandals, Victims

As the 90's fade into history, it's not really the unhealthy trends of our society that we're becoming practically engaged to the unique agenda, to the great detour of the individual.

The signs have been around for a while. You've seen them repeatedly in those pages. People interested in technology who ask you many questions or push too deeply or too eagerly are seen as a threat because they might adversely affect profits or otherwise lose in authority. The act has steadily been transforming from a greater sense of freedom of speech to an attempt to run when it all involves around the neck of the business.

Now there's nothing wrong with someone, people making a profit or even making more just doesn't hurt about the things others value. After all, there's more for 30 types in the world as well as on the net. But that's not how it's perceived. Increasingly, the needs of the individual are being sacrificed for the needs of big business. Corporate mentality is replacing our sense of individual liberty. And the pointing is down a very dark road.

Consider things that have happened in the very recent past.
A teenage hacker from Washington State played a game to hacking several prominent government web sites, including the White House and the United States Information Agency. He says there were no damages caused to any of the sites (open four separate messages and having the site shut down for a few days). The government paid that 15 months in prison and a \$40,000 fine was appropriate. Reports say he could have gotten 15 years and a \$250,000 fine.

Last that some recently coincidentally in the same state police fired tear gas and shot rubber bullets at a crowd of peaceful demonstrators who were protesting the World Trade Organization's meeting in Seattle. Many said it was the worst civil unrest since Vietnam.

At the same time, you might not think these signs have very much to do with one another. But when you analyze them a little more closely, it's not difficult to see that they are both symptoms of the same disease.
Much of the unprovoked brutality inflicted by the Seattle police year after year, despite the abundance of social and police images that cover major newsweek quickly ran a story about the "Seattle anarchists" who started all the trouble in the and "whatever the word" violence was implemented, one thought way of those people.

System caused no damage to any of the systems he got into. He the mass media alerted him to someone dangerous. He named a file. And all reports say that he still

down the 1990s for eight days. This is how long it took them to attack. About security, something they had never bothered to do in the first place. The club I take away their security - they never had it to begin with. But this fact doesn't seem as relevant in any of the stories that run. And what about the act of taking a young, veteran away from his friends and family for more than a year and forcing him to live with periodically dangerous circumstances? Well... that's justice.

In both cases, that which is most precious to our society - the individual - was made to suffer because of our actions and fear of expression caused by a culture of some government. We've seen this before in the Pacific region with Bernie S. and Kevin Altmack. They're always scheduled for release on January 21, 2000. People who go to forbidden places, after less than a year, or are just seen as an inconvenience are harassed, abused, even tortured.

Why punish such severely harmless individuals, whether they be hackers or demonstrators? Could it be that their very existence stimulates a real threat that the authorities have no idea how to handle?
In Seattle, the demands between what happened and what was reported were almost comical - statements of commercial property being damaged or destroyed where violence against individuals was merely glossed over, with the exception of certain keywords and alternative news. What kind of a society are we turning into when commercial issues are more important than the participation of those who are the good people of Time Warner (CNN) have raised their own Microsoft and General Electric (MSNBC)? Or even Disney (ABC)? Why would such bastions of journalism ignore the real story? Where there maybe more concerned with whether the WTO would contribute to look out for them and their interests?

The way indeed have developed a horrible, grand outlook on society. It's hard not to when things like this are so often followed. But the biggest is that our step of the individual has only strengthened. If there's one thing we've learned from events like this is that people want to begin their lives as we were led to believe. People do care, they are paying attention, and they see the obvious signs of the future. How does society react to the government anymore, big business is increasingly seen as a threat. As our leaders and individuals, politicians are filling our expanding prison system.

It's not very difficult to see how we got to this sorry state. All of the progress and responsibility gone. The real question is how do we regain control of our destinies?

Continued on Page 55

ACCESSING FORBIDDEN NTFS DRIVES

BY JIMBERSYN

The following information is described for the purposes of education. I'm aware this procedure could be and has been used to circumvent the security of any Windows NT machine which the user has physical access to. I do not condone the use of this information for illegal purposes, nor am I responsible for anything stupid anyone does with this information. NTFS support in Linux is still Beta, reading and copying from the drive is stable, but copying to the drive is an "at your own risk" deal.

Prereq

One of the major misconceptions about Windows NT is that it's a secure operating system and that by formatting a disk with NTFS and properly setting permissions, nobody can access the information on that disk without permission to do so.

There are two problems with this theory. First, it is wrong. Second, all it really does is make crash recovery more difficult. I will describe a method for circumventing NTFS security: using a Linux boot disk. This can be useful in many ways. From the system administrator's view, this is an excellent way to get access to important files on a system that has crashed before formatting the hard drive and reinstalling NT. From the hacker's view, it gives access to the system files. He would not normally have access to the registry, user profiles, PST files, etc.

In order to accomplish this you will need some knowledge of Linux. It is possible to do this with a DOS bootable floppy, but the only NTFS drivers available are read only and therefore useless to me. In all fairness, Linux has this vulnerability as well.

The first thing you need is a copy of the latest version of Trinux. This is a Linux mini distribution developed for network administration and it has many useful features. Its best feature though is its ability to boot from a floppy on virtually any machine which has more than 64K of RAM.

Get two blank floppy disks, go to www.trinux.org and download the following files: boot.gz, classic.gz, rfs.o, and carvle.exe. The current version as of this writing is 0.92, however use version 0.61 as there is not enough room for these

files on the 0.92 hard disk. Follow the instructions for unzipping and making the boot disk and the data disk. If you can't get this far, you have no business doing this in the first place.

When this is done, copy rfs.o to the boot disk, edit the bootdisk file, add the line "rfs" to it (no quotes), and save the file. At this point it is best if you boot the disk a few times, first to test it and second to get familiar with what will happen and how Trinux will respond to commands given it. This way there are no surprises.

What Next

Now take the two floppies to the machine you want to access. Boot the first disk. When it asks if you have a data disk put in the second disk and type "y" then hit return. It will then ask you again. Type "n" and hit return.

When it is finished booting, you will have a "Trinux 0.61" prompt. Type "modules" - this loads the NTFS script. Type "mount -t rfs /dev/hd01 /mnt". This will mount the first partition on the first hard drive. This assumes the first partition on the first hard drive is an NTFS partition. If not, the following table will give you an idea of how to mount the proper drive.

These are for IDE drives:
/dev/hd01
/dev/hd02 second partition on the first drive
/dev/hd01 first partition on the second hard drive
/dev/hd02 second partition on the second hard drive

You get the idea. Now you should have access to the drive. You can now put a third floppy in the drive and type "mount -t rfs /dev/hd01 /floppy". This gives you access to the floppy so you have some place to save files to. Alternatively, if you are really clever you could get the proper modules for zip drive support which connects to the LPT port (serio and ppa.o), which would give you more flexibility in copying files.

I would like to give creative credit to CM, who challenged me to find a way to access an NTFS system from a floppy disk.

SECURITY THROUGH IT? NOT LIKELY

by KurruptzK

For quite some time, leading has meant knowing a decent amount about UNIX, or for you old school hackers, VMS, TS0, or whatever. Maybe you would have to know a lot about Netware, but this was as far into the PC world as you could go. Well, it's 2000 now, and Microsoft is getting its feet into the World Wide Web meaning the outsourcing of NT machines on the net is increasing. A lot. More, many of your UNIX-only hackers have, but NT is only going to get bigger as time goes on. Here's another Windows 2000 (beta) curiosity... what if the web page you want to delete happens to be sitting on an NT server? You're not going to have to suck it in and learn to break into NT machines, no.

My local favorite thing about Windows is its port socket capabilities. This means I can open ports when you want, which opens less doors to plug into which means less port-security. And if you search the exploit archives for NT stuff, you won't find much besides DOS exploits and shell32 exploits to be executed locally on the NT LAN. All of a sudden your ocean of UNIX looking exploits is about 10 percent applicable in the NT world.

For starters, NT is an NTOS, meaning a client-server environment. If you refer to a UNIX machine and execute a command, your request is processed on the machine, using its resources. If you connect to a Windows box and issue a command, the process is handled onto your computer, using your resources, and if it encounters any errors, it's then returned, if given you fit, on your own computer. How do you execute commands on the net on your large Windows machine? Suddenly these NT machines seem interchangeable. Netware.

How to hack an NT box all depends on what exactly your goal is. With UNIX, you're usually looking to get a root shell. As far as you know, you can have a "Shell" on a remote NT box. NT is set up to share resources - files, applications,

printers, you get the idea. Advertising your workstation in the network works as an entry in itself (you don't have to be logging into a large UNIX machine), and if it needs something from a server, you have to connect to it via NetBIOS. In Windows Netware, this means copying a logical network drive to a particular share.

Microsoft Networking

Shares. The heart of Windows networks. A share is just like a volume in Netware - a directory setup to be accessed from a particular network share or folder. Inside the network's network, shares can either use share-level security, or user-level security.

Share level security means that the resource is protected by a single password, and anyone having that password can access the share. User level security is user:LNK\share, in that your permissions to a particular share depend on who you are logged in as. Now, this share-level refers to breaking into NT over the Internet, so logging in isn't possible though it is possible, see the "File Transfer" below. If port 139 is open through which it connects always is on an NT Server, and authentication is via NT Authentication and Challenge (NTLM), you can use Client for Microsoft Networks to connect to it.

First make sure you have the client installed - go to Control Panel, then Network (you should also have NetBIOS, NetBT, and TCP/IP installed). You will use the Net command to do this. Once you find your target NT machine and see an open port 139, your first step is to find out if there are any open shares. To find out, type this at a command prompt:

```
Client view /ip:address
```

If you get no error message, it probably means that the computer you attempted to connect not had any open shares (or possibly that you don't have NetBIOS Networking set up correctly on your machine, so check). If shares exist, you will see a list of them, including the share name, share type (disk, printer, etc.) and any comments the administrator wanted to include. For more NetBIOS in the

radius on the machine, use the "radius" command. If you see no open shares, there is still a possibility of hidden shares. Common hidden share names include:

- *SMB (samba)
- *ADMIN (remote administration - can you say "root shell"?)

To connect to any share, visible or hidden, you again use the Net command, in the following fashion:

Client use: `\\ip address\share name`

To check for hidden shares, just try to connect to the names given above, or any others you can think of. If it fails, you'll connect. Once you receive the "The command was completed successfully" message, you are connected to the NT machine. Logical drive I (for whatever drive letter you assigned) now becomes that share - you've mapped a network drive to it. This is similar to mounting remote filesystems in UNIX. So to see what you've connected to, change to drive I and issue a "dir". You can now use any DOS command to explore the share. The share, however, may be password protected. You may be prompted for a password right after issuing a Net Use, or after connecting when trying to traverse the filesystem. Typical linker windows can be used to adjust this. If, however, you get a message that you do not have privileges to that resource (or "access denied"), this means that the share is user-level, and since you can't really log on, you won't be able to access the share.

Once in, you will have either "read" permissions (meaning you can look at or execute files) or your READ-only file, or "read/write," meaning you can edit any file as well. To check, make a file and delete it. Use a directory and listbox it.

Utilities

There I will outline a few useful tools you should have when planning to break thru an NT box. Legion is a Windows shareserver - it will automatically change Net View commands on a server's name (or multiple addresses). Launch it, set back, and watch as it events networks for open shares. If you prefer doing everything from UNIX, Winback

could well do. Or some thing

NAT (Network Auditing Tool) is a great program by the makers of Legion. It will attempt to connect to any open share you specify, messing with passwords you provide in a well-set. It also looks for hidden shares.

Upholder is an NT password sniffer. Getting NT passwords can be tricky - see the "Password Cracking" section.

And finally, AGENT SMITH. This program will essentially make force the hell out of your target, and log all responses on file of your choice. Offenses this will be your only way to break through password protection on your share.

All four of these programs are available at The Cyber Underground (www.uscsworld.com, page 25).

Password Cracking

All the hashes reside in the SAM (Security Accounts Manager) file of the machine. To get the file, you have a few options. If you're running Windows NT yourself, you can install LpfindCrack and attempt a Remote Registry Launch. If this option you're targeting allows for registry changing, you will have the entire SAM files if you had root Lpfind. Most often, though, this doesn't work. You would always do a core dump, convert the dump and then into ASCII, and pick off the hashes. But you can do some interesting and messy (not to mention you'd have to upload software to perform a core dump). So you may have to resort to getting a core dump on the hard disk of the machine (or any other Document Controller on the network). The file you are looking for is "sam_".

The problem is that NT locks this file from users and especially disables it from being accessed while NT is running. To get it, you'll have to boot the computer in an alternate OS (Linux, DOS, etc.) and get it that way. Another problem is that the file is on an NTFS partition. DOS, of course, uses FAT, and Linux uses EXT2, so you'll need a program to access the alpha partition (such as NTFS-2000). Installing another OS onto the machine will most likely be enough, as will forcing a reboot through programs that will do it. If you're doing this, try Tassig; it is sure to do what you

ing. So before you decide a web page to put DOS 6.22 and download it onto your target, and change the boot file, look around for backup copies of sam_... It's not unheard of to find an old copy in something like "C:\winnt\debug\".

Also, if you prefer to crack passwords with UNIX, you'll have to convert the hash to a UNIX password file (GSI and pass the hashes).

FTP

The closest thing a hacker can do to substituting in an NT machine is connecting via FTP. The problem is that just because an account exists on the machine doesn't mean that it's allowed FTP access. So get the password/username, crack them, and try to FTP into them all.

If the system administrator has strict file permissions, Administrator (root) won't let. Better say, if you can't get the password, you'll have to use other administrative privileges. You can now, define rules, get more passwords for other computers on the network, upload engines, etc. Here's a trick:

Copy the Executables program on a shared drive very close to the target. You now have access to all logs on that machine.

Other Tricks

Other trick you have FTP access. The problem is, you can't execute programs or do anything else that's any fun. The answer - a Trojan. Get one that allows you can give the system access, allow for services of your target computer, and let you open and edit write windows (Xshell does all of this). Remember, you can't log in since you upload it? You have a few options. Put it in the server or subserver file, and force it into the booting (possibly with a DOS attack). Or just wait until someone reboots it. Another plug, if the machine is a root server, upload the Trojan into a CGI directory (eg: /cgi-bin, etc, etc), then request the right with a browser. If you make the path correctly, the web service will spawn (launch) the Trojan for you. Now just connect with your client and you have complete control of the computer.

Here's another scenario. Let's say you want to hack their web page. You have a few passwords, but the FTP server has been disabled. Well, if the web pages reside in a share (probably you can use SRS

DOS Eject) to edit the default.htm or index.html file. Otherwise, you can always use IFTP to upload your file. Message and Volume Explorer both have clients to upload local files via HTTP - just use the requirements and passwords you cracked.

Network sniffers can also be put into place. Trojan-Crack works with Sniff-Net (capture, a device sniffer). Search the web for other NT, Password, or Trojan (King) sniffers. The point here is that if there is over one Windows 9x machine on the network, it sends clearnet ASCII passwords when making a login, so a sniffer will always catch them.

There are also a huge variety of exploits for NT. The trick is working through the DOS spoofer and the local user. One network exploit, <http://www.uscsworld.com> (username: root) will upload any file (to your user, a target) right through DOS IFTP daemon. It's ships with most NT Server packages, and comes with one of the earlier service packs. Even if the machine is 9x (or even 1.1), a web server, it probably has this installed. One popular web server for NT is WinSIS Pro, which has a vulnerability in its packaged CGI executables. Specifically, it provides you access to upload files on the computer - without passwords.

Now, when I said that you can't log on to an NT server over the Internet, that was partially wrong. The only way to log into an NT server is to be a member of the network. So you'll have to make your computer a member. How? Hack the PDC (Primary Domain Controller) or a BDC (Backup Domain Controller). Now, domains are if you've gotten far enough "in" to make yourself a member of the domain, you probably have all the permissions you could ever want. If not, hack the program called User Manager for Domains and add yourself with your IP address.

In Summary

All in all, NT is a very different environment from UNIX or VMS. It also demands very different skills and techniques to hack. Doing so is just as rewarding as breaking into a SGARC server, and will provide you with all kinds of new and useful information. This is after all, why we do what we do.

COUNTERMEASURES REVISITED

by Seuss

The most prevalent information on telephone counter-surveillance has been floating around for at least 15 years. About the rate at the demark and measure resistance. Open the pair at the demark and measure the resistance. Abnormally high or low resistances indicate a phone tap. Homer Rieger wrote about it in last *Times*, M.L. Shannon and Paul Besokas included it in their books, and an untold number of phone phreaks have employed this technique. Despite its popularity, the technique has its shortcomings: it fails to detect devices installed at the outside plant, split pairs are undetected, and transmitters built into the phone are not tested for.

What you'll need:

- 1) Access to a local DATU.
- 2) A multimeter with high impedance scales (universal meters that measure from the gig-ohm range are available) and a capacitor-inductor probe.
- 3) An induction probe.
- 4) A frequency counter or near field detector.
- 5) Something that makes confident noise, like a tape player.
- 6) Ancillary tools (screwdrivers, a can wrench, etc.).

First, call the phone company to ask about your line's condition for ISDN or DSL. High-speed services demand a line with no loading coils and a minimum amount (less than 2500 ft.) of bridged taps. Either will cause inaccurate measurements.

Begin by taking the phone off hook and turning on your tape player (to turn on voice activated transmitters). Now, give your phone a pass with your near field detector or frequency counter. Transmitters in the phone will hopefully be picked up at this point. (Note: some speakerphones are

prone to normal RF leakage.) Next, measure the capacitance of the line, dividing the value by 83 (the average mutual capacitance for a mile of phone line). This is roughly the length of your line. Write it down, you'll need it later. Remember that 83 is an average value, which can range from .36 to .50 depending on line conditions. To get a more accurate measurement, you can fine tune your figure by comparing capacitance measurements on a section of plant cable of a known length, or use a TDR.

Disconnect all the phones from the line you want to test. Go to your demark and disconnect your pair on the customer access side. Short the pair and measure the resistance of the line from the farthest jack with the meter set to its lowest scale. Reverse the polarity of the meter and measure again. If either resistance is more than a few ohms, it would suggest a series device wired into the line somewhere on your property. Now return to your demark, open the pair, and cover the coils in electrical tape. Measure the resistance of the pair with the meter set to its highest scale. A less than infinite resistance would suggest a device wired in parallel to your line.

Testing in the outside plant should be conducted from the rear side of the demark post in order to avoid measurement error from the station protector circuit. Call the DATU and short the pair; then measure the resistance of the line. Compare the value you got for your line's length with the figures below:

Note: ESS switches incorporate a "test bus" that will add about 500 ohms to the showed pair.

These figures will vary with temperature, splitters, wet sections, and a host of other reasons. Large deviations could (but

don't necessarily) suggest something wired in series with the line. This measurement may be supplemented by either a resistance to ground measurement of both sides of the pair and a capacitance balance test or a voltage measurement. A resistive imbalance of more than 10 ohms or a noticeable drop in off-hook voltage calls for further inspection.

To test for parallel devices in the outside plant, open the line with the DATU and re-

Year Range	Loaded Pair	Unloaded Pair
299	833	833
290	809	539
299	809	320
290	120	240

peat the parallel test as described above.

Testing for telephone hook-switched overpairs requires an induction probe. Record your gain at the demark and plug all your phones back in. Turn your tape player back on and put it near your phone. Now probe all the lines coming through your

demark point. If you hear the tape player through the probe, your phone's hook-switch has been compromised.

Checking for splits on your line requires an induction probe and access to a plant wiring cabinet. Add a wire to either end of your pair with the DATU. Probe all the conductors in the bundle pair, listening for the trace tone. If you hear the tone on more than two leads (the ones connected to the line you're checking) your line has been split. This can be either a bad splicing job, or someone intentionally hooking a pair up to your line.

If any of the above tests suggest that there is something on your line, remember that there are plenty of innocent reasons a test could turn up positive, so a detailed physical search is in order. Disassembling the phone in question and comparing the leads to a schematic would be a wise idea at this point. Take the covers off your phone jacks, dig around in your demark point, peek inside wiring cabinets if you can, and so on. There are some places that are likely out of your reach, but keep in mind that they're likely out of reach to many wiretappers as well.

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over value if the bytes per year selected, for DAU10 and once "LSB BYTES PER YEAR"

Type/Key Sequence	Non-Automatic Required	2nd Key
1 (1/Key)	1	2
2	(space)	3
3	A	B
4	D	E
5	O	H
6	J	K
7	M	N
8	P	R
9	T	U
	W	X
	Y	Z

Some Words About Male-Voiced DAU's

At this point, I would mention if you something about those DAU's will be incredibly accurate work. These are an extremely early side channel writing. In fact, in a lot of over 200 DAU's that I have, I only know of one that still works. Upon speaking to the man at Harris who actually designed the DAU's, he said "It's so old, you would have dug out if". However, since it is still in use, I will soon be writing some words about it. Please note that if you find a DAU in use, I would love to get a recording of the administrative menu for it.

Last Remarks (for this issue)

To begin my ending, I would like to say to anyone who doubts "they can't fill DAU's so AOL accessories better and make it better" is not only false but stupid, but also factually wrong. The NTT can't access them less and you use whatever you'd so and the damn X your CO by doing so. Oh yes, and the "SO 80454525" 1450 of the DAU's will go on when you go. In the future, I will go into the wild and crazy world of the accessories for non standard offices. Following that will fill see what I can dig up for you. Perhaps something about (don't say), Administrator mode!

Physical and Electrical Specifications

(directly copied from manufacturer manual)

Physical Dimensions
 Length: 6.0 inches
 Width: 7.5 inches
 Height: 2.0 inches
 Weight: 1.7 pounds
(unpacked)

Battery Input Requirements (measured with respect to 0 (0 ground))
 * 26.0 - 34.0 vdc 100%
 * 600 mA maximum
 * 2-volt peak-to-peak
 * 2-volt maximum from CO

Access Line Interface (Ground Start)

- 1. Ring and Ring Return are *Off Hook Mode*.
- * Max. FCC Part 68 requirements
- * Resistance is 120 - 240 ohms at 20-30 Hz
- * Minimum DC current required is 20 mA
- * Typical AC impedance at 1 kHz is 650 ohms
- 2. Tip and Ring Resistance at *Off Hook Mode*
- * Max. FCC Part 68 requirements
- * Maximum ring voltage level is 65 vdc AC rms
- * Uninterrupted ringing duration is 300 us
- * Ringing resistance is 0.25
- 3. Secondary Dial Tone
- * Secondary dial tone is provided upon ring tip, pressed entry, and ring subscriber line activation
- * Dial tone is silenced when a digit is dialed or when the DAU RTT timeout
- * Dial tone level is -18 dBm (+/-) dBm
- * Dial tone frequency is 40 Hz +/- 8 Hz
- * Harmonic distortion is less than 10%
- 4. DTMF Tone Modulation
- * Each incoming digit tone signal is unmodulated one of the 12 channel sets shown in Table 2
- * Frequency deviation of up to +/- 2% are accepted and all deviations greater than +/- 3.5% are rejected
- * RTT will tones greater than 30 ms are accepted
- * DTMF timing is greater than 40 ms and less than seven seconds are accepted
- * Signal strength per frequency of 30 dBm/100 Hz are

accepted

- 5. Signal Message (Ring)
- * Message code level is -19 dBm
- * Pulse frequency range is 200 Hz - 1000 Hz
- No Tone-Block Interface
- 1. Typical Ring Resistance at *Idle Mode*
- * Resistance is greater than 2000 ohms
- 2. Tip and Ring Resistance at *Active Mode*
- * Resistance is 100 to 180 ohms at 20 - 90 Hz
- * Maximum DC current is 90 mA
- * Typical AC impedance at 1 kHz is 600 ohms
- 3. 447 (Signal Parameters)
- * Each outgoing digit tone message signal is transmitted from one of the 12 channel sets shown in Table 2
- * Frequency deviation is less than +/- 2%
- * Signal strength per frequency is 5 to -15 dBm
- * Digital duration is 20 ms
- * Interdigit pause is 20 ms
- 4. Dual Pulse Addressing Parameters
- * Pulse width is 60%
- * Key release rate is 10 pulses per second
- * Interdigit time is 1200 ms
- 5. Noise Current Parameters
- * Low current mode is 7 to 10 mA line 120 ohms
- * High current mode is 50 to 70 mA line 120 ohms
- * Max. source external crosstalk resistance is 200 ohms

- * Typical signal strength, measured 10-cm ground or ring-ground:
 - * At the CO it is -15 dBm to -5 dBm
 - * At the MUX it is field from the CO is -19 dBm
 - * Right Level Tone (see Differences):
 - * Tip to ring signal strength is +22 dBm +/- 1 dBm
 - * Tip-to-ground or ring-to-ground signal strength is +17 dBm +/- 3 dBm
- Autopans That You Are Too Stupid To Know DAU10 - Direct Access Test Unit FOR ARMY - Queue!**
 JKA - Part Four Application
 MDT - Real Data Test Converter
 KI - Remote Terminal

DTMF and MV Density

Frequency (Hz)	Low	High	Low	High
1200	105	120	50	90
1300	105	120	50	90
1400	105	120	50	90
1500	105	120	50	90
1600	105	120	50	90
1700	105	120	50	90
1800	105	120	50	90
1900	105	120	50	90
2000	105	120	50	90
2100	105	120	50	90
2200	105	120	50	90
2300	105	120	50	90
2400	105	120	50	90
2500	105	120	50	90
2600	105	120	50	90
2700	105	120	50	90
2800	105	120	50	90
2900	105	120	50	90
3000	105	120	50	90

THIS JUST IN

The 2600 BLUE BOX SHIRTS ARE BACK, only this time they really have a blue colored box on the front. (We didn't ourselves sometimes!) To order, send \$18 for one shirt.

530 for two, to:
 2600 Shirts, PO Box 752
 Middle Island, NY 11953

MESSAGES WITH STAPLES

By Mawerick (12/2)

Well, as you might guess, I used to work for Staples. The office Superstore. Used to. That is, until they fired me over something I did. Well, even for them, ridiculous. So, here I am, spilling my guts about the technology used in their stores.

Phones

The stores use a standard Meridian phone system with six lines: the first three outgoing local and the last three special lines. These special lines are only good for 800 calls and calls to other stores and cannot be used for regular local and/or long distance calls.

To dial another store, either hit one of the regular line buttons and dial the regular phone number, or, if you are in the store, dial the store's 700 number. Each store has two 700 numbers, one for voice and the other for fax. The voice lines are always 1-700-444-XXXX, where XXX is the 4-digit store number, padded with leading zeros. If needed, the fax lines are always 1-700-555-XXXX. As for 800 lines, these 700 numbers are only good when calling from inside a store.

Sometimes, the outgoing lines require a password. This is rather common, but is easily circumvented. By punching F4 (F4:K) from any phone, you can access the phone system's configuration menu. It does ask for a valid ID and password but the defaults are invariably 266344 ("GOWIE"), the only phone line in the store that will work in a power outage is the one the fax machine at the copy center is plugged into.

The phones also feature, in the lower right corner, a "page" button. "May I have your attention, Staples shoppers..."

Ribbon Computer

Located near the selection of paper and printer ribbons in every Staples store is an old 386 computer that is constantly running a program which is supposed to select ribbons for finding the proper ribbon. This stand-alone system has no security whatsoever. Simply pressing the spacebar to select off the screen saver and hitting Ctrl-Sreak is enough to drop you to a DOS prompt. (Rebooting and booting out of the autoexec.bat is also probably possible.) Unfortunately, once you are at a DOS prompt, there is really nothing much to do, as all the ribbon-loader files are in a special format. One thing that is possible is changing the screen saver image. It is located at C:\Ribbon\ScreenSvr2.exe, and is a standard 640x480 dot file.

Proteva

Staples sells custom-built Proteva computers. These are disguised and sold through a stand-alone system at the end of the computer wall. The "check" simply allows customers to look at specs, select various system packages and options, and print out a price quote. This system runs Windows NT, and is accessible to the misdos trick. About the only thing that is really interesting about the program is that it allows only access to the hard drive. Copying the same file and running it through Logitech reveals the different users and passwords. The Administrator password is at least somewhat secure - a field two weeks running Logitech didn't reveal it. The other logins/passwords are:

- "Guest" - This account is disabled.
- "Customer" - None - This account is used for regular customer browsing.
- "Admin" - STAPLES1234 - This one automatically leads you to features/paid from a diskette.
- "MS" - STAPLES1234 - This allows you to change the current pricing and make standard diskette which can be loaded on the same or other machine using account "up data".

Compaq BTO

Staples also sells Compaq Built-To-Order computers. These are slower and ordered from a German computer, which is usually placed right next to the Proteva. Unlike the Proteva, however, the Compaq "K550" has a power-up BIOS password and is networked into Staples' corporate WAN. This is necessary because the disk is only used as a viewer for Germany's web site where the specs, option lists, and ordering forms really fly. The site is available at www.compaq.com/retail_login and passwords are "STAPLES" where XXX is the 4-digit store code, padded with initial 0's as needed. There is very little security on this computer. Simply pressing Ctrl-Alt-Del, and "End Task"ing the work solution (really Microsoft Internet Explorer run full-screen) without the copiers, etc., drops you directly to Win95. A new browser can be fired up and, whoosh, you can surf the net. Or you can go into Network Neighborhood and look around a little. What else is on the local network? Read on...

Office Computers

Years ago, all each Staples store had in

the way of computer was an AS400 terminal. This ran over a 9600 leased line to the corporate headquarters and was used for inventory control, printing price signs, entering damages, and many other tasks. About two years ago, Staples installed Prime Relay TTS to all its stores and upgraded to three account computers in each store. The Sales Manager's office received a computer, as did the General Manager's. The third was set up as a training computer for employee use, usually in the paper or the fax office. These were generally 286 to 333MHz Pentiums with either 32 or 64 megabyte memory. All ran Win NT 4.0 SP3.

The computer in the Sales Manager's office was usually kept running a terminal program that simulated the AS400 terminal that had been removed. The General Manager's computer was used for making employee schedules and keeping track of employee purchases at the timeclock. It was also used every Sunday to do employees' payroll. The training computer was loaded with various certification and educational software and kept track of which employees had passed which "courses" at Staples. All three computers had browsers and could surf Staples intranet and the internet.

- Using hitides and Logitech on those machines revealed the following accounts:
 - Administrator: STAPLES1234 - Thought they'd make it more secure using a period.
 - Guest - Disabled.
 - System: Installer - Used, obviously, for maintenance and installation.
 - StaplesService: ServiceAgents - Yes, the login backwards.
 - Associate: Self - What was were supposed to do.
 - Manager: Staff - What the managers did it.

Sales: STAS - Our stock symbol, asser: STASWORLD - Yes, this account actually exists. Someone must have taken the login/password a little too literally when added to true in their email and password.

The Gun

With the arrival of the office computers, Staples stores also received a remote alarm. It hooked up into the system. This "gun" has a small lcd screen, an alphanumeric keypad and a scanning laser. Almost any time you can get from the AS400 terminal is available from the gun. Including price checks, slow printing, and inventory functions.

Security Personnel

Most Staples stores have a security guard at the rear door. He'll usually a net is the one who asks you to leave your bag with him when you enter the store. He's basically powerless to do anything, though. If he's behind a door, and backed by a store manager, he can refuse you entry to the store if you refuse to leave your bags with him. But most of the time, he'll let you in with a "Y'll have to check your bag when you leave." Or worse, you don't have to let him, and he can't make you.

Security Procedures

Staples policy is that a manager can only stop a suspected shoplifter at the door if that manager has kept the suspect in sight at all times from the moment they had something and hide it to the moment they try to walk out the door. This is very difficult, if not impossible, especially if the manager is following the suspect - the manager has to run past the suspect to get to the door first in order to stop him, but can't take his eyes off him. This rule is often ignored, however, as managers sometimes take the word of the security guard, or even the associates as to what has happened. Many times, nothing is done to the suspect, as there is no proof and inadequate surveillance.

Staples has a special code word to track a security problem. This code is "Fred Klotz," who used to be the head of Loss Prevention for Staples many years ago. By simply saying "Fred Klotz to aisle 4," any associate can indicate that there is a suspect person in that aisle. All other associates are supposed to drop what they are doing and converge on that location en masse in, basically, an attempt to scare the suspect into leaving.

Security Devices

Berlin Staples stores, usually those with the highest losses, have gotten a security system installed. It consists of a set of "gates" set on either side of the entrance and exit doors, and rows of sensors which interrupt the weak magnetic field set out by the gates which causes the gates to beam. This can obviously be defeated easily by removing the stickers from the merchandise. Some stores also have cameras, usually aimed at the main entrance, and possibly one in the manager room.

Well, that's enough for now. When I do up some more information, I'll be sure to write another article. Until then - happy hacking!

WWW.2600.COM

I Own Your Car!

By Sharon

I work the night shift for a major auto company near the money city in Michigan. One night all the bosses went home early and left us there alone. We had learned our first day job (on the news) that a bunch of us were being laid off and the rest were being transferred or strong-armed into quitting. The executives didn't even have the decency to tell us first, or in person. We had to hear it on T.V. So needless to say, no one was in a good mood.

When I went there is no getting out. If you quit you have to take 30 days (non-paying) before you can work at another relief facility. The software we use is only used by other related facilities. Still they wouldn't release us from our cars. Most of us had put in years of service and worked overtime to get projects out to almost deadlines set by executives who had no idea of the work involved. Even finishing our families at times, and for what? To be walked on and thrown out like yesterday's newspapers. To perform a vehicle that we will never be able to afford? No perks at this job, poor pay, no employee's discount, no job security, and the night shift makes getting anything done impossible. Basically, they own us.

After hearing of our treatment down everyone was sitting around wondering what would become of us. Three of us - who were as close to married employees as you could get - did our jobs and didn't show around while other people shacked out and played solitaire. We never took advantage of our jobs. That is, until that one night.

I was the first who mentioned a scheme, half jokingly and half seriously. "We should go down into that restricted area and try to get in." The other two guys agreed we really didn't have anything to lose. So we decided to go for it. We knew what was in there because you could see all the experimental cars from the second glass walls. The sliding doors were about 10 feet high and 15 feet wide. The only problem was that they were locked by an executive level passkey card. We knew they wouldn't let us walk right in - none of

us fit the description of an executive type.

We were obvious computer geeks, as our coworkers would say. So we thought of a plan. We grabbed a bunch of door parts, a frame here, a sealing strip there, set some calculators, sketch pads, pencils, and a few compasses left over from the manual days.

We picked up some heavy blueprints to back up our story and copied up a fake work order. Our pass cards would let us in most of the way but when we got to the glass wall, we were stuck. Stalling my work through, it just beeped. I thought about spraying some salt water in the reader. Like what people did in the old days with Coke machines, but that would have been destructive and nonproductive. Instead, so-called engineering would be our key.

A voice spoke from the intercom. "Can I help you?"

I replied, "This reader won't read my card."

The voice came back, "You're not in the computer for this area."

"I have a job that requires my unrestricted access to this area."

"It'll be right down," the voice shot back.

We showed him our ID badges that proved we worked there and he asked what we were doing. We explained that we needed to get in the restricted area to do some last minute changes to the seats in one of the vehicles before this year's auto show, which was only a few weeks away. (Inconvenient, the guard wouldn't let us through. We noticed the blue prints and showed him where the trouble was. Being the senior he was, he couldn't read the blueprints or make heads or tails of it.)

There is an airflow problem throughout the door system, which at high speeds causes wind deviation thus amplifying cable noise and increasing internal pressure. We have in some more technical BS and buzz words and finally he was convinced what we showed him the phony work order. He slipped his passkey through the door and opened it for us. He watched us for about a half hour until he got a buzz from another part of the building and then to go. We told him this will take us most of

the night and we could let ourselves out. There were police barriers on this side. Now the fun would begin.

Most of you won't see the vehicle we were about to play with until 2002. It's a prototype and there were six of them there. In the trunk was a fuel cell, holding about 50 gallons of racing fuel. The rest of the car were kicked out and set out about 6" in the rear, and usually to the corners of the car. It was super charged, none of that cheap turbo charge crap. Under the hood was, well you wouldn't believe me if I told you. Needless to say this wasn't the fuel economizing car that everyone thinks we're all working on to save the environment. This car was pure evil. Oh, did I mention that we use one of the most prestigious car companies, that we see the emblem of luxury and class? Most other folks want one of our cars when they arrive. So this car will be a shock when it's released. And it will be released.

We doubted enough. Now it was time to test out our make-up theory. There are all sorts of keys in these vehicles and full tanks of gas. No problems on the car so no one will know what it is if they see it. Heck, at 2 am who would be out on the roads anyway? We fired her up and two of us went out, leaving one behind to open the door so we could get back in. I took the second spin at the wheel and, oh my gosh, talk about power and speed. I had never driven a super charged vehicle. There was no waiting for the turbo to kick in. You hit the gas and it was pure power. The four wheel spin was as long as you held the gas down. At 80 mph it seemed like we were crawling and every time I tapped the peddle the tires would squeal. At 95 mph they would squeal! I think I got whiplash that day. At 8 mph I hit a Chevrolet pulled up next to me, a new sleek one. He gunned his engine and when the light changed I floored the gas. Dad insists - the car just sat there spinning its wheels like we were on ice. OK, I'm a computer geek, not a drag racer. I came off the entrance ramp to I-75 at 75 mph. I was looking for a certain switch that I had heard existed. I flipped off the headlights and hit the switch. Night Vision.

A camera is mounted in the hood in the symbol. It displays the image on the window and you can see through fog and rain. It makes everything white and is very cool. I like it because I can drive with no head-

light on. The ride was smooth, and steering was tight and effortless even at speeds over 130. The car also has GPS installed in case you get lost or you lose your keys in it - or if the car is stolen. If you get in an accident and the airbag goes off, it notifies the headquarters and patches you into a 24 hour occupational who can listen in on your radio and talk directly to you using cellular towers. This system and features are commonly referred to as telemetry, another new buzzword that will be popping up later this year. The home base of this is networked and the recipient can watch your car's movement on her screen. She can patch her screen to other receptionists too. Other features of this system allow you to navigate and avoid the red lights of the town as you're driving through. No performance fees, just one yearly fee. Had I not been having so much fun I would have thought to get the dial-in number to the automobile computer.

It was making me hunch time so I hit the blue button which connected the car to the 24 hour help. She gave us her name and asked how she could help us. I said we needed the location of a 24 hour restaurant. She gave us a few of them and then told me to turn right at the next exit and guiding me there no problem. All without even asking my name, or where I was calling from. I later learned this service will cost about \$400 a year but that is unlimited service calling. Data travels at a slow analog speed of 2400 bps. This should change soon as more digital towers are put up along the expressways. These all vehicles will use speed-spectrum.

The lady said she was getting a reading of engine compartment heat and I suggested I enter the radiator was OK. Even though it appeared full to her. It might have been due to my driving over 100 mph for so long because I called her "I'll check for you." I told her just think what other people would do if they fell into the wrong hands. This service makes the Precision III ID feature look like small potatoes.

Tecklog in the future will soon put its way into the automobile. This car itself is one large computer, there are microchips in every part of the car, each controlling components, windows, mirrors, seats, door locks, power windows, etc. Mirrors will be easily inserted into the car's onboard system via the TV player which will serve as a

An Intro to Paging Networks and POCSSAG/FLEX interception

by Blake Axe

Pages are very, very common nowadays. Coverage is widespread and cheap, and the technology is supported by most. Ever wonder though, what happens on these paging networks? Ever wonder what kind of traffic comes across these pager frequencies? Ever listen to your scanner on a pager frequency in frustration, listening the data stream across that you just can't interpret? Want to tap your radio, get a decoding program, and see what you've been missing?

Before I begin, let's cover just exactly how these pagers are able to make it from the caller's key pad to the display of the pager in question. Or perhaps your monitor...

Let's start with a hypothetical situation in which I would like to speak with my friend Dave. Then, I pick up my phone and dial Dave's pager number (555-1234). I hear his message. "Type in your phone number and hit the send sign." So I comply, enter 555-4321 and then hang up.

Here's where the fun starts. This is all dependent on the coverage area of the pager. The paging company receives the page when I enter it, and locks up the contents of the page it is to be sent to. A code is sent to the pager in an RFR or a call page; it identifies each specific pager on a given frequency. The paging company will then send the data up to a satellite (usually), where it is broadcast to all pagers that serve that particular paging network. (Remember last year, when everyone's pagers stopped working for a few days? It was just such a satellite that went out of orbit.) The pager then transmits the page to all locations that Dave's pager is accessible to. In this case, let's say that Dave's pager has a coverage area that consists of a chunk of the East Coast, going from Boston down to Washington DC, and out to Philadelphia. The page intended for him is transmitted all throughout that region. Since a pager is a one-way device, the network has no idea as to where the pager is, what it's doing, etc., so it just transmits each page all over the coverage area, every time.

So, you may say, "What's that in for me?" Well, it means two different things. First, pagers can be cloned with no trace of detection because the network just sends out the pages, and any pager with that cap-

code on that frequency will keep and receive the data. Second, it means that you

can monitor pagers that are not based in their area. Based on the example of Dave's pager, he might have bought it in New York City. He also could live there. However, because the data is transmitted all over the coverage area, monitoring stations in Boston, Washington DC, and Philadelphia could all intercept his pages in real time. Many paging customers are unaware of their paging coverage areas and usually do not delete the NPA (area code) from which the page is being received. This can cause problems for the monitoring individual, who must always remember that several pager pages shown on the decoder display are not necessarily for their own NPA.

The Pager Decoding Setup

Maybe you know this, maybe you don't. Paging networks aren't encrypted. They all transmit data in the clear, generally in one of two formats. The older format is POCSSAG; which stands for Post Office Code Standard Advertisements. POCSSAG is easily identified by two separate tones and then a burst of data. POCSSAG is fairly easy to decode. It's OK on the other hand, is a bit more difficult, but not impossible. FLEX signals have only a single tone preceding the data burst. Here's how to make those annoying signals out of your scanner and into your monitor. You will need:

1. A scanner or other receiver with a discriminator output. A discriminator output is a direct examination to the output of the discriminator chip on your scanner. This is accomplished by soldering a single wire to the output pin of the XFET discriminator chip to the inner conductor of a jack installed on the scanner. K9A's jacks are commonly used for convenience. A list of scanners and their discriminator chips can be found at: <http://www.cwtrials.net/sundials.html>.
2. For obvious reasons, the larger and more spacious a scanner is, internally, the more the modification is to perform.
3. A computer is required to actually intercept and display the pager. Most pager decoding software runs under Windows. This includes all software which uses the sound card to decode signals. If you have a case where there are a few programs which will run under DOS.
3. You will need a SoundBlaster card.

particular sound card. This will let you see POCSSAG traffic. Or you can build a data slicer and decode FLEX traffic too. Or you can buy one from Texas 2-Way for about \$80 or so. The SoundBlaster method will obviously let up your computer while decoding pages. Using the DOS box and will let you use your better computer for more important stuff.

4. Antennas, cables, etc.... You will need an RCA cable (preferably shielded) to take the discriminator output either into the sound card or into the slicer. If using a slicer, you will also need the cable in between your slicer to your computer. As far as antennas go, pager signals are very strong, so you won't need more of an antenna. A rubber duckie with a right angle adapter, attached right to the back of the radio, will be more than enough. The signals are so strong that you might even be able to get away with a paper clip, should you have an antenna jack. Think of what kind of an antenna your pager has; this should give you a good idea of what the requirements are to the antenna department.

Connect your scanner's discriminator output to either your data slicer or your sound card. If using a sound card, be sure to use the line in connection. If using a data slicer, connect that to the correct port on your computer. You just set a nice, strong frequency and start paging.

Where are they? Well, the vast majority of numeric pagers are encrypted between 670 and 932mhz. Try these. Or if you want to try decoding some alphanumeric pagers, try the VHF range around 158mhz. There is also some activity in the 460-470mhz range.

Now, what about software, you say? That's where things start to get somewhat difficult. Motorola designed most paging protocols in raw and holds the keys to them. Any software that decodes POCSSAG or FLEX is a violation of Motorola's intellectual property rights. So one day, the people at Motorola decided that they didn't want their software floating around. They

provided to look up every one who had copies posted on the Web and told them that if they didn't take down specific programs off of the Web, it was court time.

The threatened webmasters searched the offending copies, fearing a lawsuit from Motorola. After that, our good friends from the United States Service Service arrested Bill Check and Keith Knippenfeld for using software that decodes hardware and data stream illegal. Of course, these arrests were ridiculous, but nobody wanted to get on a national wireless disappearance. Check-ing around English or German sites may yield some interesting results.

Now you're ready. Fire up the software. Get that receiver on a nice, loud frequency. Look at all of the pages streaming across the network. Give it a few hours... getting bored yet? Not? Okay... now that you have a functional decoding setup, let's make use to monitor! Here's how to start them. First you need the frequency; it's usually listed on the back of the pager. Also, you can try to determine what paging company they use, and then retail engineer the company out of the frequency. www.pager.com also has a search function where you can locate all of the paging terminals (and frequencies) in your area, listed by who owns em. Not bad. So you have the frequency... now what? Well, well, well, you have to actually talk to this person. Get your setup running on the frequency that this pager's pager is using. Now, page him. Pay close attention to the data coming across the network... see your phone number there? See the episode that your phone number is addressed to? That's it. Some better decoding programs have provisions to log every single page to a certain code to a log file... that's a good thing. Get a data sheet, get everything up on a desktop 486, and have fun gathering data.

For updates to this article visit the Phone Four Network (<http://www.pfn.org>). Mail can be sent to the Phone Four address and it will find its way to me.

DO YOU HAVE A SECRET?

Is it something so sensitive you can't risk us back-tracing your fingerprints from the envelope you mail us? We understand. That's why our fax machine is always ready to talk to you. 516-474-2677 (note: we will soon be forced against our will to use the new 631 area code - make the most out of the old code while it lasts!)

STARTLING NEWS

We've decided to turn back the hands of time and embark on a shrewd marketing ploy. Effective immediately, our subscription price will revert to what it was nearly ten years ago - a mere \$18!



Why are we doing this? Have we completely lost our minds? We will not dignify that with a response. But we will say that we are looking to get more subscribers and since the vast majority of people buy 2600 in the stores, this seems as good a way as any. Plus, it'll shut up those people who complain that subscribing is more expensive than buying it at the stands. That's no longer the case. Now, in addition to not being able to place their near help-along ads, you will also save money over the newsstand price: just like Time and Newsweek.

We're also lowering the price of our back issues. With every issue we stockpile, we lose more space so we'd really like to get rid of the damn things. You can now get back issues for \$20 per year or \$5 per issue from 1988 on. Overseas those numbers are \$25 and \$6.25 respectively.

Name: _____ Airt. Enclosed: _____

Address: _____ Apt. # _____

City: _____ State: _____ Zip: _____

Individual Subscriptions (North America)

1 Year - \$18 2 Years - \$33 3 Years - \$45

Overseas Subscriptions

1 Year Individual - \$26

Librate Subscription

(anywhere!)

\$260

Back Issues

\$20 per year (\$25 overseas), 1984-1998

Indicate year(s): _____

Photocopy this page, fill it out, and send it to:

2600 Subscriptions, PO Box 752, Middle Island, NY 11953

HACK THE MEDIA

by Jim Nieken

Much has been said lately about journalists and the media, from their outright disregard for the likes of Kevin Mitnick and others, to MTV's much criticized foray into the likes of Babes. Few would deny the power and influence of journalists, yet no one seems to live their. They seem to print falsehoods and most other "underground" substances in a negative light, and there are a number of reasons for this. Among them, deadlines and other time constraints, the busy-making nature of the news gathering process, and the necessity to simplify information. But there are ways to turn the idiosyncrasies of journalism to your advantage, and to help reporters present an accurate and positive account. Follow my advice, and you might even find something good written about you in the press.

First, some background. I have been working for various newspapers for years, both in residence and staff reporter positions. My job has grown the pages of papers both big and small, but I grew up working with local papers and tend to prefer them. They aren't done very much work with rejection, but the news gathering process is mostly interchangeable. Although a writer by trade, I am a geek at heart and just sympathize with the poor treatment my colleagues often give local news.

This article is intended to explain how print and television journalists investigate and report a story, and what you can do if you are ever asked for an interview.

The Deadline: Your Ticket to Increased Adrenaline Output

Years ago, when I was just getting into the newspaper business, a goateed old editor took me aside and explained what I was really supposed to be doing there. "My job," he said, "is filling up newspapers. Your job is meeting deadlines." His point was that while journalists' integrity was all well and good, newspapers could't print blank pages.

Deadlines are not just a part of the job; they are often the single most impor-

tant concern. Reporters need to get their work in on time, and that can sometimes mean sacrificing accuracy for haste.

No one wants to print an untruthful story, but the fact is that the less time you spend researching, the less quality information you will get. That information also needs to be analyzed if it is to be conveyed correctly, which also takes time.

Lowering deadlines are not the only factor in inaccurate reporting, but if you ever find yourself the subject of a story you should rate them two account. If a reporter says that he or she has a day or less to cover a story, be concerned. If they have more than a few days they probably won't hardly misrepresent you, and if they have several weeks the deadline is not likely to affect the quality of the reporting at all. This is why local television news reports are often so steady. Local TV reporters yearning-gers all often work under deadlines of a few hours or less. They are told to run out to a location, pose in front of a building or a car accident, and make off a few facts provided by local law enforcement. They don't have time to actually investigate, which is the cause of all those controversies.

As a subject, there is little you can do about deadlines, but you may want to ask when their story is due. If you want to help yourself and create a better story, try your best to work within the limits of the reporter. If you just did something especially easily by the local power grid and you would like your side of the story told before they had you off to a holding cell, try to be available to media sources. You don't get your side out if you won't talk, and newspapers may be faced to print only what they have heard from other sources. Those may be your friends and family, but they could also be the police and other government agencies, or the guy whose life was ruined because he missed the season premiere of *Ally McBeal* when you took out the electric company.

The Interview as Seduction and Betrayal

In college, a journalism professor once told me that there are only two kinds of people in the world: those who are interviewed often and who know how to be interviewed — and those who aren't and don't. As a reporter, I get most of my information via the interviewing process, but no other news-gathering technique has a greater potential for distorting information. Unlike a school district budget, or the winner of an election, or something equally quantifiable, conversations are more subject to interpretation than most people realize. You always must survive the reporter's own words, into my head or into my notes, into news words in the final story, just the neutral, neutral of various editors, and finally back into the hands of a hundred thousand readers. It's not at all uncommon for people to complain that they were misrepresented or misrepresented when they see their words in print. I hear it all the time.

The distortion extends beyond merely getting the exact wording of a quote wrong. Words are usually taken totally out of context, possibly extrapolated from sloppy notes, or even than-casualty fabrications. It's very uncommon for a reporter to really take quotes (we tend to be pretty anal when it comes to what's inside quote marks), but dozens of us in news rooms are set up. It all depends on how your comments are explained and what context they are placed in.

You could say something like: "I don't really like people who break into other people's computers just to mess with stuff. I mean, the idiots usually deserve what they get for leaving stuff wide open, but it's really mean and on one should take advantage of people like that."

But a week later this might be printed in the local paper: "...One hacker said that he feels no sympathy for people whose computers are attacked or vandalized. The hacker usually desecrates what they get for leaving their stuff wide open, he said casually."

The quote was reproduced accurately, but the context was totally reversed. Because of this, reporters have fairly calm, or controversial, queries. They split

up a piece of writing like you wouldn't believe. If you're not careful they could even end up right in the headline. If it takes three minutes to set up and hypotactical situations and philosophical justifications before you can say something like "...and I guess it looked at it that way we should probably just blow up the phone company building," you can be assured they will not print the philosophical justifications and slip right into your admission of a terrorist plot.

As an interviewer, you can help in a number of ways. First, don't say anything that needs a lot of background or buildup. We work with sound bites, and you should never say anything you don't want printed in case you make it clear that it's all the record. All reporters will respect your wishes to not have a quote printed, but always pay attention to what you are saying. Don't say anything too sensitive. Go slowly. We can only write so fast, and it allows you to choose your words more precisely. If you're ever suspicious, ask the reporter to read your words back to you. Make sure you like what it says, because they may come back to haunt you and this is the only chance you are going to get to change them.

Also, always realize that you never have to answer any question asked by a reporter. We do not eggs, and we do not force you to do anything. On the other hand, most journalists have longer expense accounts and better are an extremely common industry practice. You might suggest that you sit down over dinner or take Be sure to order a dessert.

Journalists May Be Stupid, But Our Readers Are Even Stupidier

My handy Heronall Word grammar checker tells me that this document is written at or around the 10th grade reading level. This means that if you saw read this paper without knowing your first, you are capable of reading at almost that level. Most magazines and nearly all newspapers are written at or around the 6th grade level. This is not because this is all the average American can handle. Rather, it keeps Joe Public from checking on his coffee at 7:10 A.M. as he scans through words like "astrolouphus" for stupidity. Newspapers are mass mediums. They are consumed by the general public, and are

written so people don't have to know anything about the subject being reported. Newspapers are expected to provide only general information and basic facts. You might succeed in explaining the intricacies of exploiting a CGI loophole and stealing root access on a server to a reporter, but the writer still needs to explain that to 500,000 non-technical people. Most journalists are fairly good at assimilating information, but they are still not likely to get technical details correct. Even if they do understand it for some reason, it's likely to get twisted in the translation.

There is little you can do in this regard, other than to try simplifying your language. Assume that the reporter has no clue when it comes to technology, and no intention of printing anything less than bit-relevant anyway.

Journalism is a Business:

A Lesson in

Economic Theory

News reporting organizations are not a public service. They are a business, like any other, and they must remain profitable if they want to continue printing or broadcasting. In order to do this, they will run interesting stories about interesting events. If that means starting an issue or exaggerating a point, it can easily be justified. Most of my journalism classes in college discussed or giving ultracreative nonfactual stories enough "creative" to make them interesting. But there is a quality at work: "stizzle" versus "responsibility." Most reporters have no desire to print a false story, but most reporters have no desire to print a boring story either. Often the two sides are at least partially in conflict. But it could be worse than that, depending on the particular ethics of the organization doing the news gathering.

The journalistic reputation of the news work of newspaper doing the story is typically a good barometer of how concerned they are about responsible reporting. I would read most PBS or The New York Times with just about anything, although they make errors like anyone else. I would trust the *Boston Globe* or the *Washington Post* to get most of the story right. I

would expect the Associated Press, CNN, ABC, and the average local paper to at least get the basic information correct. I would not spare a moment of money that CBS, NBC, MSNBC, Fox News, and most major city papers result at least a passing resemblance of reality. As for most Internet news channels, or any local television news station, or the likes of MTV, their efforts are more akin to self-serving propaganda than journalism. I wouldn't trust MTV to report anything accurately, let alone something as delicate as what it means to be a hacker.

Every news-gathering company has a different perspective on sensationalism versus responsibility. It's probably in your best interest to evaluate how much you trust the particular organization before you consent to a story about or involving you. If you don't already trust them or all of what they tell you, don't expect that you and your story will fare any better. One thing you can do to help is to consistently mention how much you distrust the news and how they've let you down considerably in the past. Doing it in the forefront of the reporter's mind some accuracy is more important to you than what is provocative. Make him or her think that they will be betraying you if they misrepresented you in any way. It usually helps a lot.

Conclusion: Reporters are

People, Too

If you ever find yourself the subject of a news story, be aware that the end product will probably not show you the same way you see yourself. Complicated details tend to be simplified, and that can mean a significant change for something as technical as computer hacking.

Like I say, no reporter and no newspaper wants to print on beautiful story. It's not likely that they will really liberate facts, but they can be taken out of context and reworked to create a more interesting story. Reporters often go into a story with preconceived ideas, and it can be difficult to change them. Just as always, be truthful, and explain things as clearly as you can. If the reporter is any good, you may actually like what you read in the paper or see on TV a few days later.

HOW TO CREATE NEW URBAN LEGENDS

by Jim Johnston

Urban legends are fantastic stories people tell each other. They hear the story from a friend, she heard it from someone else, and so on. The result is the same as playing that sticky game of telephone: the stories evolve, often becoming funnier, scarier, or sicker. They also take on local personalities, sometimes naming local streets or cities or other names of people. And, of course, they become impossible to verify.

The growth of the Internet has provided an ideal medium for the transfer of urban legends. They can now be e-mailed to people around the world instantly and easily.

Common Characteristics of

Urban Legends

Many urban legends contain similar characteristics. Usually they have a moral to tell. "Don't do this" or "Beware for this." Many e-mailed legends describe people into reading them now, or by using just an e-mailing to a sense of ethics. Some legends are downright gruesome. They tap into our subconscious fears causing us to react. "I knew you'd rather urban legends stories, readable and great human. (Like the story of the woman who found a stray dog in New York City. She took it to her home. Fed it, washed it, bought it a flea collar, and put it to the vet. The vet examined it and told the woman she had actually caught an overused whorl.)"

Three New Urban Stories

The Enlarged Christmanger

This happened in my friend's Christian instructor at a college in Vancouver, BC. He said that one day during class the president of the college walked in and announced that the professor had been promoted to head of the department. Everybody clapped and congratulated the beaming man. Later that night when he went home and announced his good fortune to his family he was so excited that he gave

his five year old son a big bear hug. He heard a terrible cracking and the boy was rushed to Vancouver Public General Hospital. The x rays revealed that the boy had fractured these lower humeri. (A broken humeri). Not only did the chiropractor instruct me to accept his new promotion, the next day he tearfully announced to the class that he was resigning immediately.

Analysis: Any story where a kid dies or is hurt gets passed around by parents. This story works because it's ironic. It's a chiropractor of all people who broke his kid's bones. He gets from being on top of the world to resigning in disgrace, all in one day. The story also plays on people's fears about creating humeri. Every story needs a hook that makes people pass it around. *Author: Don't buy people too hard, especially if you are a chiropractor who just got a promotion.*

The Miracle Diet

My aunt's friend worked with a woman who was always trying these "miracle diets." One day she came across a small classified ad for a revolutionary diet that guaranteed rapid weight loss. She paid and was sent the pills in the mail about a week later. To her delight she started losing weight. Shortly after then losing and faster. She went from 200 pounds to 125. Unfortunately, by the third week, she was feeling more and more nauseous. One day her doctor took some x-rays of her intestines and found a three-foot segment growing inside her! The diet company had sent her a pill infested with capeworm eggs. She was given antibiotics, a diet that kills worms, and put on a diet high in iron salts. The salt caused her to gain all her weight back, and she ballooned again to 215 pounds.

Analysis: Have you ever imagined what it would be like to have a three-foot worm attached to your insides, slugging up all the food you just ate? (Didn't you probably have a Lysol toilet

this fact and evaluated it. To add some humor, I made the woman gain all the weight back by a punishment for her being so glibly on speed.

Author: Don't try miracle diets or even diets. Also notice how I used the word antibiotics. Using jagged words your story more believable. (I also used jargon in the chiropractor story with humor.)

Man Dies Eating Internet is Safe for Children

A 40-year-old man, 55, died yesterday after a bomb that he was holding exploded in his arms near Pittsburgh, Arizona. Solomon was apparently providing dangerous information about how to construct bombs. Molotov cocktails, and poisonous substances.

David Riggs, Solomon's friend, said he two had been arguing the week before about the danger of the Internet. "I told him that children could find stuff that would be a lot of damage. I said the net should be more regulated." According to Riggs, Solomon disagreed. "I downloaded a real file about how to use household chemicals to make a bomb right in your kitchen," said Riggs when he showed Solomon the information. Solomon denied that the recipe would work. "The recipe is a hoax and is quite a legend and said that he would prove it to me."

The next day Riggs was phoned by Flagstaff police and asked to identify the body of his friend. Constable Samantha Matthews said that an ambulance was called to Solomon's residence after neighbors complained of an explosion. Police found remnants of a makeshift bomb and encouraged the nearby apartment buildings. Solomon was taken to Hotel Dieu Hospital but was pronounced dead on arrival.

"He was trying to prove to his friend that the instructions for making the bomb were bogus," said Matthews. "People should be very cautious about what they receive on the Internet," she added. The police are still investigating the incident.

Analysis: You will notice right away that I made this story sound like a news report. Don't be afraid to try different styles. In this case, a news report adds

credibility to an otherwise unbelievable story. Again, I used humor and irony in the story. The big idea going for this tale is that it pushes to society's fears of technology.

Author: The Internet is evil.

Creating Your Own Legend

Watch out. Some people will be up on you for creating yet another untrue legend that circulates through society. There is a mass movement on the Internet of people dedicated to de-bunking urban legends (see www.barebackresearch.com and the Computer Virus Watch's page: kermite.com/virus55). They think we waste our time passing on useless stories or hoaxes. It's also annoying to get e-mail on to you: e-mail accounts to all messages, half of them silly stories that have been forwarded to thousands of people before you. Then again, almost everybody enjoys a good tale.

Fortunately, folklorists don't think it's possible for people to make up an urban legend. Jan Harold Brunvand, author of several popular books on urban legends, believes that true legends develop from people changing details of a story until the story develops its own oral tradition. Scholars call this process commercial re-creation. But if your story is clever enough, it might get e-mailed to hundreds of different people and develop its own tradition.

Okay, so how do we do it? Just think of a good story. Make it funny, disgusting, scary, not too unbelievable, and perhaps add a moral. It's real if it happened to your friend's mother's dentist. Keep it local, use street names if possible. I strongly suggest that you don't make it scary and deadly. There is nothing more annoying than reading about some woman who lost the man of her dreams and blew him up. Keep it vicious and satirical. For entertainment purposes, feel free to use the ones I just made up or change them to your liking. Those they're out there, you can't keep them copyright or anything like that. They are in the public domain. Just remember that by creating these stories (they're not legends yet), you're not exactly making the world a better place to live.

E

FD-302 (Rev. 10-6-95)	REPORT DATE	11/19/95
FD-302 (Rev. 10-6-95)	REPORT NUMBER	95-012
REPORT DATE	REPORT NUMBER	10/11/95

Vehicle Information

Year: 1995
Make: Ford
Model: Explorer
VIN: 1F3S1945...

Owner Information

Name: [Redacted]
Address: [Redacted]
City: [Redacted]

Specific Material Desired

2" of INTERIOR, door-site material printed in
code.

[Signature]

FOR INFORMATION:
FBI - Memphis
FBI - Dallas
FBI - Houston
FBI - New Orleans

While we managed to suppress the urge to send body hair and plant shavings, we just couldn't resist sending two inches "of interior, web-site material printed in code." That happened to be Kevin's e-mail that we've been sending him for years which has helped to keep him sane all this time. To these people, anything they don't understand could be considered a "code" which pretty much includes it all.

Hacking Explorer [the car]

by Bob

Since I only have my own vehicle I can't be sure if this will work on earlier/later Explorers or any of Ford's other vehicles with keyless entry systems.

Entry

Given that the Explorer in question has a keypad entry system let's begin. The numbers on the keypad will range from 1 to 0 grouped in pairs of two. For instance: {1-2} {3-4} {5-6} {7-8} {9-0}. These keypads come preset with a five digit permanent code, which you can change if you so please. Unfortunately the permanent code still stays in memory. If we pretend that you can hit any numeral or numbers (including as long as you get the code in the right order. So you can pretty much punch random numbers without recognizing for any length of time and not set off alarms, you still be allowed entry if you get the code in the right order. Also, hitting the {3-4} button after the code has been entered and the driver's side door unlocked (it does this automatically when the code is punched in) will unlock all the doors. Turning the key to the within four seconds in any of the car's locks also has this effect.

Getting the Code

Ford is very stupid if the following is true. The nature of the last three digits of my entry code "911" made me think that Ford may actually preset their numbers to have this as the last three digits so that it will be easy to remember. If this is so then "XXXX11" where "XX" is any two number combination, would be the format to use in hacking the code. This will greatly reduce the hacking time. If this is not the case then the fact that you can just keep pressing numbers randomly until it unlocks, instead of having to wait five seconds before trying

again, makes Ford seem rather stupid as well.

Now What

Now that you have the code you get to decide what to do with it. You could change the code on the door, but that's useless because you can still use the permanent code. Nevertheless, here is how to go about adding your own personal code (useful for launching your power over a friend).

Enter the permanent code. Within five seconds press the {1-2} button. Within five seconds of that, enter the new code. To erase a personal code, repeat steps 1 and 2 but skip step 2 (wait six seconds).

The car's alarm system (if equipped) can be started from the keypad by pressing {7-8} {9-0} and disarmed by simply entering the code. The Audiotax feature (if you or your friend is cheap) can also be disabled and re-enabled using the keypad. Just enter the permanent code (not the user set code) and within five seconds hold the {7-8} button and then within five more seconds press and release the {1-2} button. (Yes, you can't be go at the {7-8} button - you just have to send them and look stupid.)

Just for Fun

Even without the entry code you can still lock all the doors or the set by holding in the {7-8} and {9-0} buttons at the same time. You can also set your friend's seat (if equipped) to all the way forward (if they are not left or all the way back (if they are short). First, turn the car on. Then move the seat to the desired position. Press the set button, the light will come on. While the light is on, press control 1.

And while you're playing with your friend's car, make sure you step a "Kevin" bumper sticker on the back. How? Have fun!

Spooing Call Waiting ID

by Lucky225

Lucky225@hotmail.com

In this article, I will explain how Caller ID on Call Waiting (Call Waiting ID) works and how it is possible to display messages on Caller ID equipment.

When you have call waiting, you will notice that you hear two tones if you have Call Waiting ID. The first is the Subscriber Alert Signal (SAS or 'call waiting beep') tone. This is just your normal call waiting beep (440Hz for 33ms). The second tone is a CAS (CFE Alert Signal) tone. This is a short alarm DTMF tone of 2140x2750Hz. This tone alerts the CPE (Customer Premise Equipment) in other words, the Caller ID box that there is a call waiting tone. The CPE then makes the handset send an acknowledgment tone (DTMF 'V' or 'D' tone) to the central office to tell the CO that it is OK to send caller ID information. Next, the central office sends out Caller ID information in FSK format. The name and number are displayed on the CPE and the CPE unmutes the handset.

ACTS has rapidly disappeared over the past few years. The primary reason for this is the FCC. With the 1996 telecommunications bill, the FCC ruled that ILECs may not offer any services to their own payphone divisions which they do not also offer to independent operators of CO-COTS. This made offering ACTS and ground start billing problematic. Since ACTS would have to be upgraded to charge different rates based on each COCOT operator's criteria. Additionally, it would have been necessary for ILECs to handle separations and settlements for the COCOT systems. This was a bigger job than ILECs wanted - especially to maintain a system which was increasingly plagued by toll fraud.

As a result, many ILECs began replacing their phones with Northern Telecom hybrids or COCOTizing their Western Electric payphones (such as what BellSouth did). Because the billing is all done in the phone itself, rather than via ACTS, there is no need to fool ACTS any longer. Therefore, you can play tones of a COCOT or a COCOTized ILEC phone all day and it won't work. Also, some ILECs who kept ACTS (usually by offering it to COCOT owners but making the fees so high that nobody took advantage) such as Pacific Bell have installed filter chips in their for-profit phones. These filters block the handset microphone until the call supervisor, which does an effective job of blocking redialing. Redialing does still work in some places. However, it's eventually going away. What really should go into blocking are access charges - since long distance ought not be billed by the minute anyway. But I digress....

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Spooing

To send a fake message to be displayed on the Caller ID box you will need a recording of an FSK transmission. We are currently working on a program that will create an audio file with whatever information you want. If you would like to help please e-mail me. In the meantime you can do the following: Order Call Waiting ID or go to a friend's house who has it. Call your phone when it's in use so you get a call waiting beep. Make sure there are no CPE's or the like. When you hear the CAS tone send an acknowledgment tone. Back and the central office will send the FSK signal over the line. Record this with a micro-recorder or some other recording device. Once you have your FSK recorded call the person you want to put the CID message on and play a CAS tone. You'll hear his CPE chirp back with a acknowledgment tone. Then play your recording of the FSK signal. If you did it just enough the information will show up on his caller ID screen.

Obtaining Tones

You can make an orange box (CAS tone generator) by modifying a tone dialer. Just take out the 3.5kHz crystal and put in an 8.1kHz crystal and the star button will create a CAS tone! You can make acknowledgment tones by creating a 8.1kHz box (Glenn's story found on the Internet).

The Sprint Integrated On-demand Network (ION)

by Prototype Zero

prototypezero@earthlink.com

Recently I happened upon a lot of information on Sprint's new ION technology. I decided to share this info with my community. ION

stands for Integrated On-demand Network. The basic idea of ION is to provide customers with unlimited numbers of phone lines, etc. The system works by dynamically allocating bandwidth to the places it is needed. You can pick up another extension in your home and link in to a conference already going on, or make another call as if you had two phone lines, or more. No problems with paying for extra lines for your mobile, fax, etc. You pay Sprint monthly by how much bandwidth you consumed. That could get pricey. Not to mention you could be constantly connected to the Internet as if through a T1.

Sprint has teamed up with Bellcore and Cisco, and are planning to sell their equipment through Radio Shack, who already carries a wide variety of Sprint products. Bellcore is providing the central software framework for ION's network, in addition to providing consultant services to ensure reliability of the new hardware for the system, both in the CO and the home/business. They will also provide the ability of voice over Asynchronous Transfer Mode (ATM) and the ability to connect to other carriers' legacy circuit-switched networks. Several companies have committed to using ION, including Coastal States Management, Ernst & Young LLP, Healthmark, Silicon Graphics, and Tandem. They remember back in the 80's when Mc-Donalds volunteered to test ISDN?

The fiber-wide networks were deployed to the best of my knowledge last fall from Chicago, Atlanta, Dallas, Houston, Kansas City, Denver, and New York. The reason these

cities were chosen as the initial city networks was because of the existing conditions resident in each of them, including broadband MAN's (Metropolitan Area Network) and strong customer bases. Sprint claims the ION lines can carry as many calls as Sprint, AT&T, and MCI currently carry put together. Methum.....

Here's how it works: The nationwide Sprint Fiber-optic network is connected to service nodes which in turn connect to the MAN's. The fiber-optic network is connected to the Internet and other data networks. The MAN's connect homes and small and large businesses all over the state. Every residence/business would have a central hub which connects them to the MAN. A diagram provided by Sprint shows a home having a fax machine, a computer, and a phone line connected to a hub which has a direct line to the MAN. The general layout of the network is a star topology with the fiber-optic network at the center.

The Future

We can only wait to find out the future of this emerging technology. I will write another article on the possible hackability of ION when the technology becomes more mainstream (especially when I get to use it). The idea of an extremely Wide Area Network sounds very interesting (funny how 'bout that Network Neighborhood?). and if the network has some a countermeasure technology, it's our job to find out all about it. It would seem slightly scary to have your phone/fax/mailman all hooked into the same line and controlled by the same. Would you have a choice of ISPs? What are the possibilities for voice/data? Or packet sniffing? We'll see soon.

My thanks to Vexxion25 for getting me a lot of info on ION's. Please drop me a line if you're interested in this article.

Winter 1999-1900

Understanding Microsoft Exchange

by Paylay

paylay@jagath.com

Microsoft Exchange Server is one of the most popular and widely deployed groupware and messaging servers around. It's also very easy to install and configure, so that of course, Exchange is only as secure as NT. But rely on an unhardened and deprecated system administrator.

The purpose of this article is to introduce the features of Microsoft Exchange, how it works, and its vulnerabilities. I am not going to teach you how to hack into NT's volumes; it could be written on a 3.5-inch floppy.

Understanding Exchange Server

Microsoft Exchange Server is a groupware and messaging tool, built the foundation to large corporations. A lot of smaller companies also use it because of the ease of installation and native support for Outlook and Reader. Like all Microsoft products, it uses proprietary protocols and mail transfer methods. But it also supports more popular standards of mail transfer and the like. "Out of the box" Exchange supports many protocols including POP3, IMAP4, X.400, X.500, LDAP, SMTP, POP3, and IMAP4. The X.400 and X.500 protocols can be quite fun, but that is a whole other article. Internally, it supports connectivity to other mail systems such as MS Mail, Xpress, CC-Mail, Citigroup, and SNAIDS. For Linux, it connects to a built-in SMTP server.

Connection and Authentication

Exchange Server supports four ways to connect to it:

1. Exchange Client: "Exchange" client is a MAPI program that can remotely connect to an Exchange server. For a long time it was only the Exchange Client which shipped with early versions of Exchange and Microsoft Outlook 97/98/99/00. These clients use NT authentication, meaning you have to have an NT account on the server-domain with appropriate permissions in order to connect. Recently, IIP announced local OpenMail by HL-UX, and Linux supports Exchange server connectivity. I haven't seen it so I can't tell you how it works, but the Linux version sounds like something fun to hack around with.

2. WWW: Starting with Exchange version 5.0, Exchange has a feature called Outlook Web Access. A server equipped with IIS3.0, Active Server Pages, and Exchange 5.0 and

also can present the Outlook interface through a web browser so users can access their mail. Challenge-Response authentication is the default, but if required, IIS 3.0 authentication step the authentication down to default so Exchange users can access their mail. This is a common mistake a lot of admins make, sacrificing security for usability. The default path to Exchange's OWA is "... A lot of companies allow anonymous access to public folders. If you peek around long enough, a lot of information can be gained from reading public folders. A side note: OWA uses LDAP to do queries on the Global Address List. If you can access OWA from the Internet, chances are they have anonymous LDAP enabled. With a LDAP-enabled mail reader, you are browsing their corporate email list in no time. In most Exchange sites, email address = NT username. Well, so!

3. POP3: Exchange allows POP3 clients to connect to the mail server. If an administrator enables this, they usually enable client authentication. I have noticed most admins would rather just enable their local mail client with upgrading mail clients.

4. IMAP4: See POP3. Same authentication.

Now that I have laid out various protocols, it's obvious there are various ways to connect to Exchange from the Internet. Microsoft has had their share of security problems with Exchange, which were subsequently fixed by an Exchange Service pack or hot fix. I have been working with Exchange for years now, and I have not once seen a site that has the latest service packs or hot fix. So, the first step in understanding what level you are working with, two ways to get this info, look at the mail headers:

```
[smtp] with SMTP (Microsoft Exchange Internet Mail Service Version 5.5.2232.9)
```

```
[smtp] 230 mail.paylay.com ES-MTP Server (Microsoft Exchange Internet Mail Service 5.5.2232.9) ready
```

Mail	Exchange Version
4.0.837	Exchange 4.0
4.0.838	Exchange 4.0 SP1
4.0.993	Exchange 4.0 SP2
	(also related to Exchange 4.0)
4.0.994	Exchange 4.0 SP3
4.0.995	Exchange 4.0 SP4
5.0.1437	Exchange 5.0
5.0.1438	Exchange 5.0 SP1
5.0.1960	Exchange 5.5
5.5.2232	Exchange 5.5 SP1
5.5.2438	Exchange 5.5 SP2

I almost broke out into a laugh when I thought the hospital's system had been breached. That I received reading the message:

"THIS IS A SECURITY EXERCISE FOR THE HOSPITAL."

Oh well, it was fun. A few moments later, another mail arrived saying, "Again in Theater 6 Room, look for my signature therapist and report them to security." Considering I was looking kind of suspicious there didn't look like my signature, I was a little bit more than a little bit. I decided to wear my ID badge for the day. Good to know the drill is still in Love year mode.

Shah Parthi

Stories of the Past

Dear 2600:

Enjoy your magazine! I wish I had a magazine like this. I missed it in my college days. I went to a university in 1980 or a junior college. When I got to a university, I got an account (email) and was able to program through a console terminal. I was an engineering student and you know how long the early morning programming and coding through that I could get into. The only time I even did was when a class would enable me to use the engineering terminals and let a system logging off. I happened upon it. I wrote a script that would open reading the mail files. It logged on. The basic engineering program that I had to remember to log off before leaving the terminal. After class I had a board account terminal that someone had not logged off of. When I checked the account number I found out it was the account for the person I found. I wrote another script that would log in. It was a bit more serious, basically it would "forget about it. Not one else has. I found the same damn account open again. So this time I wrote a script that would lock the terminal. The login screen and code for his account number and password. The second login was my back. It sent the password to a dummy account that I made. The script could work on a console terminal or a terminal. That is what I did. I had a terminal account number who had a password and never told the engineer manager they had it. They were a bit confused but they didn't know the account number. It even says a problem, even though he said to enter the password. The file that was creating a script, it was as the password you had seen. That the script file change the password you log off. I guess the account number and password across the engineering department and I wrote the account script the other way was not supposed to. My wife had enough to know the file in the password again and that my password. I had more people on other engineering students and you know how long to have a terminal open without logging off. But I was a student terminal anyway, keep up the good work and remember to have fun, but do no harm.

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